

NEW GENERA OF AUSTRALIAN HESPERIIDAE AND A NEW
SUBSPECIES.

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During the visit of Brigadier W. H. Evans to Australia early in 1932, the opportunity was taken to thoroughly discuss this family of Australian butterflies. General Evans brought with him a very large number of species from the Australian and Oriental regions, which, together with those in the Australian Museum, made a greater number of species than had ever been gathered together before from the Australian region. It was mutually agreed that I should describe new genera, species and subspecies belonging to Australia, whilst General Evans would describe those from the Papuan and Polynesian subregions and the Oriental region.

A paper describing a number of new subspecies has already been read before the Linnean Society of New South Wales, and will be published in September. This communication is the result of study begun in Sydney, but not concluded before General Evans left Australia. General Evans finished the work on the voyage to England, and at the British Museum. He has sent his notes to me with the suggestion that I should publish the Australian portion. Without his great assistance the work would not have been so complete, as many of the genera range beyond Australia, and a study of Papuan and Oriental forms is necessary to understand the Australian species.

In this family, there are no great differences in wing venation, but variations in the shape of the antennal club have been found to furnish reliable clues to the separation of genera. The presence or absence of secondary sexual characters, though useful, are not of primary importance. The male genitalia show a certain amount of variation; generally speaking, differences in the clasp are not of generic value, but marked differences in the uncus may be of importance.

Subfamily TRAPEZITINAE.

Of the fifty-four known species, fifty-one are confined to Australia, where their development has presumably proceeded without external interference. The remaining three species occur in the Papuan subregion. The only allies appear to be a few species from Madagascar, which however may not even belong to this subfamily.

ANISYNTOIDES, n.gen.

Antennae shorter than half the length of costa of forewing; antennal club bent beyond the middle, with apiculus short and blunt. Forewing with vein 5 almost straight; origin of vein 2 nearer base than end of cell; origin of vein 3 near end of cell. Male without a sex brand. Genotype *argenteo-ornatus*, Hewitson, from Western Australia.

This genus contains the one species which is a much stouter built insect than *cynone*, the genotype of *Anisynta*, and the species congeneric with it. In its antennal characters it differs from *Trapezites* and *Anisynta*.

PASMA, n.gen.

Antennal club bent before the middle, apiculus blunt. Forewing with origin of vein 2 midway between base and end of cell. Male without sex brand. Genotype *tasmanica*, Miskin.

This genus will also contain the rare species *polysema*, Lower. The two species have pointed forewings and are stoutly built.

ANISYNTA, Lower.

In "The Butterflies of Australia," 1914, p. 181, it was pointed out that the genus as treated there contained somewhat divergent species. I have separated the three stoutly built species above and propose to extend the genus to include *monticolae*, Olliff, and *dominula*, Plötz, both of which have a sex brand on the forewing in the male. The antennal club is short, arcuate about the middle, apiculus blunt. Forewing with origin of vein 2 midway between base and end of cell. Palpi half as long again as head, instead of as long as head in the other genera. Male without or with a sex brand. Genotype *cynone*, Hewitson.

ANISYNTA CYNONE, Hewitson.

Cyclopides cynone, Hew., *Exot. Butt.*, v., fig. 14, 1874.

General Evans has examined the type in the British Museum, which is a male labelled "Australia." He considers that neither the South Australian nor the Victorian specimens he took to London are identical with the type, but should both be regarded as races of *cynone*. The locality of the type *cynone* must for the present remain in doubt.

CROITANA, n.gen.

Antennae about half the length of costa, antennal club bent well before the middle, apiculus very blunt. Forewing with origin of vein 2 much nearer end of cell than base. Male without sex brand on forewing. Hind tibiae with only one pair of spurs. Uncus ending in three blunt points. Genotype *croites*, Hewitson, from Western Australia.

The position of this species in the genus *Mesodina* has never been satisfactory. Its facies is very different to the two species of *Mesodina*, and its main point of agreement is the presence of a single pair of spurs on the hind tibiae.

FELICENA, n.gen.

Antennal club bent beyond the thickest part to a finely pointed apiculus. Forewing with vein 5 sharply bent down at origin, vein 2 at origin midway between base and end of cell. Male with a black discal brand on the forewing above composed of very long hairs. Uncus ending in four prongs. Genotype *dirpha*, Boisduval, from New Guinea.

One of the most important factors in this subfamily is the early stages of the insects. I have been able to find larvae and pupae of twenty-three of the species, and have some information concerning several others. These early stages may be divided into three sections. (a) Trapezitine: Fat, humped larvae, usually some shade of brown, feeding on *Xerotes* and grasses. Short, stout, pupae with anterior end rounded, usually brown. (b) Hesperilline: Long, cylindrical, semitransparent larvae, usually greenish, resembling the larvae of the Pamphilinae, feed chiefly on species of *Gahnia*. Pupae long, cylindrical, green or black, anterior end ending in two long blunt projections or two flattened projections, these head pieces become detached on emergence and provide specific characters. (c) Mesodine: Subcylindrical, hairy, larvae covered with long hairs, feed on *Patersonia*. Pupae dull black, with head piece smooth and slightly raised knobs, pupate head downwards.

On account of the early stages it has been found necessary to remove *malindeva*, Lower, from *Toxidia* and place it in *Hesperilla*.

The Australian species of this subfamily will fall into the genera as follows, the first species being the genotype.

TRAPEZITES.—*symmomus*, *iacchus*, *eliena*, *heteromacula*, *lutea*, *petalia*, *sciron*, *iacchoides*, *maheta*, *phigalioides*, *phigalia*.

ANISYNTOIDES.—*argenteo-ornatus*.

ANISYNTA.—*cynone*, *sphenosema*, *tillyardi*, *monticola*, *dominula*.

DISPAR.—*compacta*.

PASMA.—*tasmanica*, *polysema*.

SIGNETA.—*flammeata*, *tymbophora*.

TOXIDIA.—*tyrrhus*, *parvula*, *peroni*, *sexguttata*, *crypsigramma*, *doubledayi*, *leucostigma*, *melania*.

NEOHESPERILLA.—*crocea*, *xiphiphora*, *sentia*, *xanthomera*.

OREISPLANUS.—*munionga*, *perornata*.

HESPERILLA.—*ornata*, *picta*, *crypsargyra*, *mastersi*, *idothea*, *donnyisa*, *chryso-tricha*, *chaostola*, *andersoni*, *malindeva*.

MOTASINGHA.—*dirphia*, *atralba*.

MESODINA.—*halyzia*, *aeluropis*.

CROITANA.—*croites*.

Of the three species from the Papuan subregion *dirphia*, Bolsduval (= *albicilla*, Joicey and Talbot) is in the new genus *Felicena* and *inornatus*, Butler (= *maykora* Plötz), and *arfakensis*, Joicey and Talbot fall into *Toxidia*, being closely allied to *melania*.

Subfamily PAMPHILINAE.

The information General Evans has sent me since his return to England necessitates the following changes.

ARRHENES Mabilles.

The genotype is *marnas*, Felder. There are two *marnas*-like species in North Queensland. Under the impression that the larger and commoner species was the Australian race of *marnas* from Amboina, the smaller and rarer form was described as a new species, under the name *affinis*. This is not the case, as the smaller species is the only one found in Amboina, and the type is in the Tring Museum, and *affinis* is the Australian race. The larger species belongs to *colattus*, Plötz, though it was described from Delagoa Bay. General Evans has examined a copy of the unpublished figure of Plötz, and is certain that it represents the larger *marnas*-like species from New Guinea, and that the locality given by Plötz is a mistake. Both *marnas* (with the Australian race *affinis*) and *colattus* fall into Mabilles's genus *Arrhenes*.

PADRAONA TANUS, Plötz.

Apaustus tanus, Plötz, *Berl. Ent. Zeit.*, 29, p. 228. *Padraona sunias*, Auctorum.

The species *sunias* was described from Amboina, and is without the sex brand in the male, which is present in the Australian species, to which the name *sunias* has been wrongly applied. Two races are found in Australia,

and are described by Lower, *Trans. Roy. Soc. S. Aust.*, 1911, p. 150-1, as *Ocybadistes reclinitta* and *O. sunias*, and in "The Butterflies of Australia," 1914, p. 204, figures as *Padraona sunias*.

PADRAONA TANUS NIHANA, Fruhstorfer.

Ocybadistes tanus nihana, *Iris*, 1911, p. 44.

On the upperside of the forewing the orange-yellow band is as wide as the black marginal band, the entire basal area is orange-yellow: on the upperside of the hindwing the discal orange-yellow band is wider than the marginal black band, and there are usually orange-yellow spots in areas 6 and 7. On the underside of the hindwing the markings are complete.

Typically from Waigou; also found at Port Darwin and in North Queensland, the Key and Aru Islands.

PADRAONA TANUS NOLA, n.subsp.

Male: Upperside, forewing brown-black, with cell broadly orange, extending to base, but not continuously to dorsum, and just touching sub-apical dots, discal orange band narrow, internally bordered from veins 1a to above vein 4 by an oblique sex band; longitudinal orange streaks above and below vein 1a towards base. Hindwing brown-black, with a moderately broad orange discal band, with a minute spot in area 6, sometimes absent, and an orange spot in cell. Underside with the markings as above, but very much obscured in the orange-brown colour of the apex of forewing and the hindwing, an additional faint spot in area 7 of hindwing, which also has a faint greenish tint.

Female: Upperside, brown-black, with markings much narrower and darker than in the male, the base of forewing wholly brown-black. Underside as in the male.

Described from six males and one female from Port Macquarie in November in the Australian Museum. The range of this race will be from the Manning River to Brisbane. It differs from the northern race in that the orange markings are much narrower, and there is also a brown-black streak in the male, under the median vein, reaching the base. On the underside, the markings are not so prominent as in the northern race.

BAORYNNIS, n.gen.

Antennae very short, not as long as vein 12; antennal club stout, rounded with a short pointed apiculus. Forewing with apex of cell produced, vein 5 opposite vein 9. Hyaline spots on both wings. Male without a sex mark. Genotype *amalia*, Semper.

This genus forms the transition from the *Pamphila* group to the *Baoris* group.
